

IN THE CLAIMS

1. (currently amended) A method of screening for therapeutic agents useful in the treatment of a disease selected from the group ~~comprised in a group of diseases~~ consisting of cardiovascular diseases, dermatological diseases, gastroenterological diseases, cancer, hematological diseases, neurological ~~neurological~~ diseases, urological diseases, respiratory diseases and reproduction disorders, in a mammal, comprising the steps of

i) contacting a test compound with a NAALADASE 2 polypeptide, and

ii) detecting ~~detect~~ binding of said test compound to said NAALADASE 2 polypeptide.

2. (currently amended) A method of screening for therapeutic agents useful in the treatment of a disease selected from the group ~~comprised in a group of diseases~~ consisting of cardiovascular diseases, dermatological diseases, gastroenterological diseases, cancer, hematological diseases, neurological ~~neurological~~ diseases, urological diseases, respiratory diseases and reproduction disorders, in a mammal, comprising the steps of

i) determining ~~the~~ activity of a NAALADASE 2 polypeptide at a certain concentration of a test compound or in the absence of said test compound, and

ii) determining the activity of said polypeptide at a different concentration of said test compound.

3. (currently amended) A method of screening for therapeutic agents useful in the treatment of a disease selected from the group ~~comprised in a group of diseases~~ consisting of cardiovascular diseases, dermatological diseases, gastroenterological diseases, cancer, hematological diseases, neurological ~~neurological~~ diseases, urological diseases, respiratory diseases and reproduction disorders, in a mammal, comprising the steps of

i) determining the activity of a NAALADASE 2 polypeptide at a certain concentration of a test compound, and

ii) determining the activity of a NAALADASE 2 polypeptide at the presence of a compound known to be a regulator of a NAALADASE 2 polypeptide.

4. (currently amended) The method of claim 1 ~~any of claims 1 to 3~~, wherein the step of contacting is in or at the surface of a cell.

5. (currently amended) The method of claim 1 ~~any of claims 1 to 3~~, wherein the cell is *in vitro*.

6. (currently amended) The method of claim 1 ~~any of claims 1 to 3~~, wherein the step of contacting is in a cell-free system.

7. (currently amended) The method of claim 1 ~~any of claims 1 to 3~~, wherein the polypeptide is coupled to a detectable label.

8. (currently amended) The method of claim 1 ~~any of claims 1 to 3~~, wherein the compound is coupled to a detectable label.

9. (currently amended) The method of claim 1 ~~any of claims 1 to 3~~, wherein the test compound displaces a ligand which is first bound to the polypeptide.

10. (currently amended) The method of claim 1 ~~any of claims 1 to 3~~, wherein the polypeptide is attached to a solid support.

11. (currently amended) The method of claim 1 ~~any of claims 1 to 3~~, wherein the compound is attached to a solid support.

12. (currently amended) A method of screening for therapeutic agents useful in the treatment of a disease selected from the group ~~comprised in a group of diseases~~ consisting of cardiovascular diseases, dermatological diseases, gastroenterological diseases, cancer,

hematological diseases, neurological ~~neurological~~ diseases, urological diseases, respiratory diseases and reproduction disorders, in a mammal, comprising the steps of

- i) contacting a test compound with a NAALADASE 2 polynucleotide, and
- ii) detecting ~~detect~~ binding of said test compound to said NAALADASE 2 polynucleotide.

13. (original) The method of claim 12 wherein the nucleic acid molecule is RNA.

14. (original) The method of claim 12 wherein the contacting step is in or at the surface of a cell.

15. (original) The method of claim 12 wherein the contacting step is in a cell-free system.

16. (original) The method of claim 12 wherein polynucleotide is coupled to a detectable label.

17. (original) The method of claim 12 wherein the test compound is coupled to a detectable label.

18. (currently amended) A method of diagnosing a disease selected from the group ~~comprised in a group of diseases~~ consisting of cardiovascular diseases, dermatological diseases, gastroenterological diseases, cancer, hematological diseases, neurological ~~neurological~~ diseases, urological diseases, respiratory diseases and reproduction disorders, in a mammal, comprising the steps of

- i) determining the amount of a NAALADASE 2 polynucleotide in a sample taken from said mammal, and
- ii) determining the amount of NAALADASE 2 polynucleotide in healthy and/or diseased mammals.

19-20. (canceled)

21. (currently amended) A pharmaceutical composition for the treatment of a disease selected from the group ~~comprised in a group of diseases~~ consisting of cardiovascular diseases, dermatological diseases, gastroenterological diseases, cancer, hematological diseases, neurological ~~neurological~~ diseases, urological diseases, respiratory diseases and reproduction disorders, in a mammal, comprising a therapeutic agent which regulates the activity of a NAALADASE 2 polypeptide, wherein said therapeutic agent is

- i) a small molecule,
- ii) an RNA molecule,
- iii) an antisense oligonucleotide,
- iv) a polypeptide,
- v) an antibody, or
- vi) a ribozyme.

22. (currently amended) A pharmaceutical composition for the treatment of a disease selected from the group ~~comprised in a group of diseases~~ consisting of cardiovascular diseases, dermatological diseases, gastroenterological diseases, cancer, hematological diseases, neurological ~~neurological~~ diseases, urological diseases, respiratory diseases and reproduction disorders, in a mammal, comprising a NAALADASE 2 polynucleotide.

23. (currently amended) A pharmaceutical composition for the treatment of a disease selected from the group ~~comprised in a group of diseases~~ consisting of cardiovascular diseases, endocrinological diseases, metabolic diseases, cancer, inflammation, gastroenterological diseases, hematological diseases, respiratory diseases, neurological diseases, urological diseases and reproduction disorders in a mammal comprising a NAALADASE 2 polypeptide.

24-26. (canceled)